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Original Communications.

IMPALEMENT OF ABDOMEN AND THORAX, WITH DISSECTION TWENTY YEARS SUBSEQUENTLY.

Communicated to the Boston Society for Medical Improvement, Jan. 8, 1872,
by JOSEPH SARGENT, M.D., Worcester.

SOME of the older members of the Society may recollect the case of impalement which I reported to this Society about eighteen years ago. The account was published in the transactions of the Society at that time. It was, in brief, an account of a woman 37 years of age, who, in sliding down the hay from a loft, was impaled on the handle of a pitchfork, which entered the body through the vagina, to a distance of twenty-two inches, where it was arrested by the upper left rib, which it apparently broke, and by the woman's feet reaching the floor. There was no injury of bladder, of uterus or of intestine, the urine being passed without blood, and there being no escape of fæces or of flatus and no peritonitis. I found blood flowing from the vagina, and fulness and soreness and pain in the locality of the supposed fractured rib, where there was afterwards emphysema and crepitation as of broken bone, and subsequently prominent callus. I saw, also, the pitchfork-handle, with its abrupt bloody line twenty-two inches from its rounded end, and afterwards placed it in the cabinet of the Society.

The accident occurred August 7th, 1851. The patient died Dec. 29th, 1871; and I made the autopsy Dec. 31st, about forty-six hours after death, of which the following is my report:—

The left thorax was observed to be considerably more prominent than the right. No percussion was made. Dividing the right sterno-costal cartilages and sawing through the left clavicle near the shoulder, I lifted the sternum and the left ribs, exposing the cavity of the left chest, which was found to be entirely filled with proper contents of the abdomen. These were afterwards found to be the stomach, the transverse colon with a few inches of the descending colon, and a considerable portion of the small intestines. All of these had passed through an opening in the diaphragm at the left of the median line. This opening was an irregular oval, with rounded edges, and occupied a large part of the left half of the diaphragm, being about four inches in diameter. The stomach and all that part of the intestines lying in the chest, and also the portion of small intestine in the abdomen were distended with flatus, while the descending colon and sigmoid flexure were scarcely larger than the finger and were filled with scybala. One fold of the small intestine in the chest, at the left side of the aperture in the diaphragm and just above its constriction, was agglutinated by a red, rough thickening of its peritoneal coat so as to present a mass which was at first mistaken for the spleen, which organ was afterwards found in the abdominal cavity and in healthy condition. There were some small coagula lying on the intestines in the right side of the abdomen, which I could explain only by referring them to this diseased surface, a small effusion having occurred in life in the act of vomiting, or by some handling of the patient *post mortem*. The peritoneal coat of the intestines was generally reddened, without being sticky, and there was no appearance of pus or of lymph in the abdomen.

There were adhesions midway of the left costal pleura, between it and the omentum. The transverse colon and a fold of the small intestine were crowding against the clavicle and the upper rib.

The callus of fracture of this first rib was quite conspicuous.*

* My friend, Dr. J. B. S. Jackson, who has examined all the parts comprised in this description, writes me that he does not think that this rib was ever broken. He says "the cartilage that connects it with the sternum is quite irregular on its lower edge, and there is an extensive development in it of as perfect bone as the rib itself, very different from the common ossified cartilage. Broken cartilage, it is said, unites by bone. Now why was not this cartilage broken? Not perfectly—for the upper edge is smooth and regular." The patient herself,

The left lung was compressed to the thickness of the hand, and was permeable to air only at its anterior surface, and in its lower lobe, and in all for a space of perhaps five inches by one inch. It had also contracted adhesions with the stomach. The heart was crowded to the right of the sternum. It was entirely healthy, as was also the right lung.

On removing the contents of the abdomen, a large, irregular cicatrix was quite obvious in the peritoneum of the left recto-uterine *cul de sac*.

I send for demonstration the sternum and a portion of the left clavicle with the upper two ribs; and also the left lower ribs, with the whole diaphragm and the organs *in situ*.*

I had not seen this patient for nearly three years before she died. Her last medical treatment was under "Homœopathy," which she testified her want of confidence in, as all homœopathists do, by adding potential doses to the numerous comfits which it gratifies their credulity to swallow. There was a saucer full of sugar powders at her bed-side, while she was in the habit of taking four teaspoonfuls of laudanum in a night.

I am told that she suffered greatly and for many years with oppression and flatulence, and constipation, and sometimes with nausea. She complained especially of the left sub-sternal region. She could not lie on her right side nor on her back, and was so tired of lying on her left side that she sat up most of the time for a year before her death, and had bed sores about the coccyx. She had sat up at night mostly for nine or ten years. Her last illness attracted the less attention because her whole life had long been one of so much suffering. She complained, however, especially of pain in the left hypochondrium, and I could not but associate this with the inflamed intestinal peritoneum which I have described in that locality. With this pain, vomiting does not seem to have been a prominent symptom, although my information, here, is not entirely reliable.

I am told that this patient, who in her various distress for many years had sought, at many hands, relief which she could never procure, had for a long time been in the habit of taking opium and morphine in large quantities.

There were present at the *post-mortem* examination Dr. Gage, Dr. Wood, Dr. Geo. Bates, Dr. J. Marcus Rice, Dr. Park and Dr. C. H. Davis.

The foregoing is the paper as presented to the Boston Society for Medical Improvement, the parts having been demonstrated by Dr. J. B. S. Jackson, with the addition of the foot-note as to what I considered the callus of the broken rib and Dr. Jackson's correction. In acceding to numerous requests for its publication, I have but little to add. The case is interesting as being perhaps unique. The treatment was only by enforced rest, the chest being supported firmly by a broad bandage, and the system saturated with morphine, of which the patient got three grains, in one-grain doses, within six hours from the time of the injury. The recovery was, perhaps, not very remarkable, when we look at it in the light, so to speak, of subcutaneous surgery, and consider that, except for the slight injury to the lung, as proved by the emphysema, it was only the vagina and the diaghragm and the rib or cartilage that were injured. The large, rounded end of the pitchfork would much more readily glide by organs than damage them. The question immediately suggests itself how long had these proper contents of the abdomen occupied the thorax? I am entirely unable to answer this, having made no careful examination whatever of the patient after the first fortnight following the injury. In the notes of the examination, at my first visit, I say, the patient lying on her back, "The abdomen was somewhat tumid, but universally resonant quite down to the flanks. The thorax resounds well, also, quite down to the back on each side, and the respiration is heard everywhere in front." And the following day, August 8, 1851, in the morning, I record, "Abdomen resonant universally and not tender. Thorax resonant; respiration vesicular. Some emphysema above left clavicle. Pulse not much accelerated." On the evening of the same day, I record, "Emphysema not noticeable." Aug. 9, 1851, I state, "Pulse 120. Abdomen and chest still resonant and not tender. It gives her pain in left chest, as it has from the beginning, to draw a full breath, and I do not hear the respiration, as patient lies, in the left chest; but I suppose this to be from insufficient expansion. She wears the bandage very tight." On the evening of the same day, I record, "Pulse

as it is stated in my notes, taken at the time, two days after the accident, said that "when she drew a full breath she felt something snap and catch." And she placed this sensation just on the line of the axilla and near the axilla.

* Dr. Sargent sent the pitchfork to the Society soon after the accident occurred.—Ed.

120. Tongue densely coated. Abdomen and chest resonant. Says that when she draws a full breath she feels something snap and catch in the left chest."

So much for the history of the condition immediately after the injury. I have stated what the patient's subsequent life was. Her death seems to have been by peritonitis, which, strange to say, was in the left thorax. Also, this was, perhaps, without any such nausea as is usually a preliminary and a constant symptom in peritonitis.

Worcester, Jan. 6., 1872.

TREPHINING IN EPILEPSY.

By James T. Boutelle, M.D., Boston.

Cases of epilepsy following depressed fractures of the skull, though happily not of frequent occurrence, are now and then met with by the surgeon. The cause of the disease is so obvious and apparently so easily removed, that an operation seems imperative. The patient, harassed by continued convulsions, discouraged by the total want of success in the various remedies he has tried, and in daily fear of bodily injury, is eager to undergo any treatment which promises even a chance of recovery, and willing to suffer anything and encounter any risk rather than live on in a hopeless condition, with a prospect of approaching idiocy.

A priori, if we remove the cause the effect will cease. It is my purpose now to discover how nearly the facts agree with this theory, as far as can be determined by a comparison of those cases only which have occurred at the Massachusetts General Hospital since its foundation. There have been in all twelve cases, and the record of a few may serve as a type of all, the clinical histories being in general very similar, viz., a blow on the head producing fracture, with depression, recovery from the immediate effects of the accident, then, after an interval of health varying from a few weeks to many years, epileptic or epileptiform seizures begin and continue, with longer or shorter intervals, but generally increasing gradually in frequency and violence.

I.—(Case 1 in table.) Cath. L., æt. 28. Entered Feb. 6th, 1832. Eighteen years ago was struck upon the head by a brick which fell from the roof a house. The result was a depressed fracture of the left parietal bone one inch from the middle of the sagittal suture. A year and a half before, she had an epileptic fit, and others occurred afterwards at irregular intervals. Last fit took place about a week before entrance.

Feb. 21st.—Dr. Warren removed all of the depressed portion with the circular trephine. The piece removed was found much thickened, so as to have caused considerable pressure on the brain.

The after-treatment was decidedly antiphlogistic. Venesection was performed twice; antimonii tart. and cathartics, mercurial and otherwise, were liberally administered. A fit occurred on March 24th and another on April 1st. No more are recorded, and the patient was discharged well on June 17th, one month and seventeen days since the last convulsion.

II.—(Case 3 in table.) M. P., æt. 26. Entered Sept. 19th, 1842. Nineteen years previously was thrown from an ox against a stone wall, and received a depressed fracture of the left parietal bone. Recovered in a few months from the immediate effects of the injury, with the exception of partial paralysis of the right side, and was able to attend to his work for nine years, when, after exposure to cold and wet, he was attacked with necrosis of various bones, chiefly of the lower extremity. Six years before entrance, he began to have epileptic fits, which occurred at intervals of three to six weeks. Remained under treatment until Nov. 4th, during which time he had three fits.

Nov. 5th.—Dr. Hayward removed, with the trephine, a piece of skull one inch in diameter. All the depressions could not be removed, several projecting points being felt at the anterior edge of the incision. The piece removed was three-fourths of an inch thick at one end and one-eighth of an inch at the other, the depressed part having been driven under and united to the skull, projecting downwards upon the brain. Flap retained by one suture.

On the second day after operation, a succession of fits took place. Venesection was performed, but every day fits occurred, five or six in number. Became unconscious on the fourth day and gradually failed. Death on the seventh day.

Autopsy.—Softening and sloughing of dura mater, and arachnoid infiltrated with pus. Abscess of left hemisphere beneath opening.

III.—(Case 4 in table.) Sarah H., æt. 10, entered May 31st, 1849. Received a blow upon the head in infancy and has been subject to epileptiform convulsions ever since. Is of little intelligence, wild and unmanageable. There is a deep depression behind the coronal suture, three or four inches long and an inch wide.

June 2d.—Trephined by Dr. J. M. Warren and the depressed portion removed. Flap secured by four sutures and adhesive straps.

Death occurred on the ninth day, after successive hæmorrhages from the longitudinal sinus, the wall of which was left very thin in dissecting off the bone, and was ruptured several days after operation by a sudden and violent movement of the patient.

IV.—(Case 6 in table.) Ada R., æt 28., entered Dec. 19th, 1850. The patient was of a scrofulous diathesis. Became subject to epileptic fits at 17 years of age, and these have occurred since at irregular intervals of two weeks to two months. Two years before entrance, while in a fit, fell upon an andiron, causing a simple depressed fracture of the skull near the vertex. Was insensible for two or three days. Some months after, three small pieces of dead bone were removed. At entrance, suffering from trouble in both knees and œdema of lower extremities. There was a depression in the right parietal bone near the sagittal suture, and in front of this another, in which the point of the finger can be buried. The fits continued, and on Dec. 8th there was paralysis of left upper extremity, with numbness of left lower extremity. On Jan. 11th, paralysis had nearly disappeared.

Feb. 1st, 1851.—Patient very eager to be trephined. The idea was discouraged, but a consultation of surgeons authorized it if she persisted. The operation was then performed by Dr. H. J. Bigelow. On raising the flaps after a crucial incision, all the bone beneath the wound was found to be eroded and irregularly depressed. A piece of bone including all the depressed portions was removed with the trephine and saw. The bone removed was one-third of an inch thick. Flaps turned back and retained so by a bandage.

The patient recovered with hardly a bad symptom, and was discharged, well, on April 3d, having had no fit since the operation. Entered again two years after for synovitis, and reported that there had been no return of the fits.

V.—(Case 7 in table.) P. McI., æt. 22, entered Dec. 23d, 1857. Three years before entrance was struck with a red-hot poker, which was thrown at him, piercing the frontal bone above the orbit and passing for three inches into the brain. Pulled it out himself, but soon after became comatose. Under the care of Dr. Hooker, of East Cambridge, he recovered and resumed business in three months. Had an epileptic fit four months after the injury, and has been subject to them since at intervals of three months. The fits were very severe, and he was very anxious to have an operation performed. A depression existed over the internal angular process of the frontal bone, partially implicating the frontal sinus. In the centre of the depression the bone is deficient.

December 24th.—Trephined by Dr. J. M. Warren. A sharp spiculum of bone was found to have projected into the brain from the interior of the piece removed. The membranes were very adherent to the bone and scalp, and were carefully dissected off with a probe. At one point where they were very thin a slight tear was made. Wound left open. Patient began to be very feverish on the second day, and was comatose on the third day. Died on the fourth day after operation.

The following is a tabulated statement of the twelve cases.

(See next page.)

From this table we find that of 12 cases 7 have proved fatal, in 4 the epilepsy was cured and 1 case was relieved, giving a mortality of 58·33 per cent. The cases are too few to allow us to draw exact conclusions from them, but it may be of interest to examine them more closely. With regard to the cause of death in the fatal cases, the following table may show something:—

Case.	*Time before death.*	*Cause of Death.*
3	7 days	Sloughing of membranes. Abscess of brain.
4	9 days	Hæmorrhage from longitudinal sinus.
7	4 days	Inflammation of brain and membranes.
8	6 days	Inflammation of brain and membranes.
9	39 days	Abscess of brain.
11	5 days	Meningitis.
12	3 days	Meningitis, with sloughing of membranes.

We find that in most of these cases, death has taken place shortly after the operation from acute meningeal and cerebral inflammation, accompanied by abscess of the brain or sloughing of the membranes. In 4 cases, the operation was followed in a short time—one hour to two days—by a rapid succession of fits, followed by hemiplegia and coma.

No. of Case.	Sex.	Age.	Time since injury.	Duration of Epilepsy.	Date.	Operator.	Result.	Cause of Death.	Where Recorded.
1	F.	28	18 years	14 years	Feb. 21, 1832	J. C. Warren	Cured		Surgical Records, vol. 10, p. 238
2	M.	26		1 week	June 3, 1838	G. Hayward	Cured		" " vol. 19, p. 119
3	M.	26	19 years	6 years	Nov. 4, 1842	G. Hayward	Died—7 days	Meningitis. Sloughing of membranes. Abscess of brain.	" " vol. 25, p. 64
4	F.	10	8 years	8 years	June 2, 1849	J. M. Warren	Died—9 days	Successive hemorrhages from longitudinal sinus.	Surgical Records, vol. 39, p. 108 and Dr. Warren's Surg. Obs.
5	M.	21	14 years	13 years	Oct. 26, 1850.	J. M. Warren	Cured		Surgical Records, vol. 45, p. 146 and Dr. W.'s Surg. Obs.
6	F.	28	2 years	11 years	Feb. 1, 1851	H. J. Bigelow	Cured		Surgical Records, vol. 45, p. 196
7	M.	22	3 years	2¾ years	Dec. 24, 1857	J. M. Warren	Died—4 days	Acute meningitis, with suppuration.	Surgical Records, vol. 76, p. 136 and Dr. W.'s Surg. Obs.
8	M.	25	15 years	10 years	Aug. 22, 1860	S. D. Townsend	Died—6 days	Acute meningitis, with symptoms of pyæmia.	Surgical Records, vol. 88, p. 57
9	M.	37	18 years	6 years	Jan. 12, 1861	H. J. Bigelow	Died—39 days	Abscess of brain.	" " vol. 93, p. 154
10	M.	25	9 weeks	4 weeks	Aug. 31, 1863	R. M. Hodges	Relieved.		" " vol. 106, p. 98
11	M.	18	8 years	2 years	Jan. 24, 1866	J. M. Warren	Died—5 days	Meningitis.	Surgical Records, vol. 122, p. 103 and Dr. W.'s Surg. Obs.
12	M.	30	16 years	15¼ years	Nov. 12, 1870	H. J. Bigelow	Died—3 days	Meningitis. Sloughing of membranes.	Surgical Records, vol. 149, p. 4

In three cases, Nos. 7, 8, 11, the dura mater was so firmly adherent that it was unavoidably torn, in two cases during operation and in the other by a spiculum of bone which was not removed. Dr. Warren, in his "Surgical Observations," attributes the non-success of case 7 to this cause, and it seems probable that in the two other cases, the intensity of the inflammation and the sloughing were due to the accident. Also in case 4 the dura mater was very adherent and was left so thin in one place that it was ruptured by a sudden movement of the patient. In this case, Dr. Warren attributes failure partly to closing the wound with sutures instead of allowing it to remain open, the result being that pus collected and aided in eroding the subjacent textures. In case 9, the patient had been doing well for eight or nine days, when abscess of the brain occurred.

It is well known that every epileptic seizure renders the subject more disposed to another, and that the longer the disease has existed the more difficult it is to cure. It seems also probable that the severity of the attacks would also greatly influence the result. Let us compare the fatal and successful cases with regard to this point. (See next page.)

This table shows that in all of the fatal cases, the duration was long, and the fits frequent. Still, in the successful cases, although there is a slight majority of short duration and mild symptoms, there were two in which the attacks were frequent and the duration 13 and 11 years. In one of these, case 6, the patient had been epileptic before the injury and yet was cured by the operation, reporting herself two years after as having had no return of the fits.

It is often difficult, after a patient has left the hospital, to ascertain whether the cure was permanent. Of the four here reported cured, one, who before operation was attacked at intervals of one to two months, had none afterward up to date of discharge, an interval of four months. Case 1 had no fits during the stay in hospital after operation, one month seventeen days, having previously had them at short intervals. In case 2, none occurred up to date of discharge, two months after operation. In case 6, none appeared during two years after leaving the hospital, and no farther record appears. In case 10, reported relieved, there had been several fits during the four weeks before operation. Here the operation was followed immediately by two fits, but no more up to date of discharge, an interval of twenty days.

Fatal.			Successful.		
No.	*Duration.*	*Severity.*	*No.*	*Duration.*	*Severity.*
3	6 years	Fits at intervals of 3 to 6 weeks.	1	1½ years	Irregular, short intervals.
4	8 years	Frequent attacks. Intellect impaired.	2		Duration doubtful. But one fit recorded.
7	3 years	Intervals of 3 months.	5	13 years	Intervals of 1 to 2 months.
8	10 years	Gradually increasing to 7 or 8 per week.	6	11 years	Intervals of 2 weeks to 2 mos.
9	6 years	Gradually increasing to 3 in 24 hours.	10	4 weeks.	Has had "several" fits.
11	2 years	Eight severe attacks.			
12	15½ years	Intervals of 2 months.			

Comparing the condition of these patients at date of entrance and of discharge, it is fair to suppose that a cure was really effected.

If an analysis of these few cases will justify any conclusions, I think the following may be drawn:—

I.—The operation promises a fair chance of success, and unless contra-indicated by an excessively feeble state of the patient, ought always to be performed.

II.—It requires dexterity and the greatest caution on the part of the operator, owing to the fact that the membranes are frequently closely adherent to the depressed bone, and the slightest laceration of them greatly increases the chances of death. There is also much uncertainty, before making the incision, as to the extent of depression and condition of the parts.

III.—The depressions must be *entirely* removed, as any projection remaining behind would nullify any benefit expected from the operation.

IV.—The wound should not be closed, but kept open to allow the freest possible discharge of pus.

V.—The knowledge of the possible occurrence of epilepsy in after life, in consequence of injury to the cranium, should make the surgeon especially careful in cases of recent fracture of the skull, to elevate every existing depression and remove all fragments and spiculæ.

Selected Papers.

HARVARD MEDICAL SCHOOL.

The recent changes and the present and prospective needs of the Medical Department of Harvard University are so clearly and authoritatively set forth in the annual report of President Eliot, just published, that the following selections will be read with interest:—

In order to appreciate the magnitude of the changes made in the Medical School at the close of the year 1870–71, one must know what the ordinary method of American medical schools has been. The main strength of the body of teachers in an American medical school is spent upon long courses of lectures on the chief medical subjects, which are given every year during from four to five months of the autumn and winter. At large medical schools these lectures are so numerous that the student who attends them all goes to five or six a day, and of course remembers very little about any of them. The same lectures are repeated every year. The student who spends two winters in the same school pays twice for the same lectures; if he remain a third year he can attend them gratuitously. A candidate for the degree of Doctor of Medicine has been required to prove that he has attended somewhere two such terms of lectures, and one of these two in the institution at which he is seeking his degree. He has been furthermore required to produce a certificate that he has studied medicine for at least three years with some regular practitioner. As this practitioner is very often an entire stranger to the Faculty who are to grant the degree, and may be living in some remote or obscure place, this certificate of three years' study is a very uncertain piece of testimony. It has not been the practice to examine with care into the genuineness of such certificates, or into the character or amount of the instruction which the bearers of the certificates have received from the physicians who sign them. At the best schools a formal examination of candidates for the degree has been held; but this examination has been private, hasty, and notoriously lax. A majority vote of the body of examiners admits the candidate to the degree, so that the new doctor may be, and frequently is, utterly ignorant of nearly half the subjects of examination. The profession and the community have had no guaranty whatever of the quality of the examination. It has been the

pecuniary interest of the teachers composing a medical Faculty to have as many pupils as possible, and to grant as many degrees as possible, their receipts being proportionate to the number of fees paid for attendance at lectures and for graduation. The money matters of a medical school, even when the school has been connected with a University, have generally been managed by its Faculty, which has therefore been a sort of trading corporation as well as a body of teachers. As a partial remedy for the glaring evils and deficiencies of the winter's surfeit of lectures, some of the best schools (and the Medical School of this University first of all) established what are called summer schools—courses of instruction given as a rule by the younger and subordinate teachers, and extending through the spring, early summer and early autumn. These supplementary courses, however, were not attended by more than one third of the students who followed the winter courses, and they were never obligatory upon candidates for a degree. Finally, the students, to whom this deplorable system of instruction has been applied, are, in the great majority of cases, persons of scanty preliminary training. Very few are graduates of colleges, and very many are deficient in the elementary branches of what is called an English education. No medical school in the country would venture to publish, uncorrected, one-quarter of the theses which candidates for a degree present as one evidence of their attainments.

It seems almost incredible that the grossly inadequate training above described should be the recognized preparation of aspirants to a profession which was once called learned, and which preëminently demands a mind well stored and a judgment well trained—a profession in which ignorance is criminality, and skill a benefaction—a profession which penetrates the most sacred retreats of human love, joy and sorrow, and deals daily with the issues of life and death.

The Faculty of the Medical School, after long discussions, unanimously resolved to venture upon a complete revolution in the system of medical education. The new plan went into effect at the beginning of the year 1871–72, but it was elaborated and announced in 1870–71. Its principal features are as follows:—Instruction will be given by lectures, recitations, clinical teaching, and practical exercises uniformly distributed throughout the academic year, and the student will be expected to attend throughout the year just as he does in the College or the schools of theology, law, and science. Secondly, the course of instruction will fill three years, beginning with the fundamental subjects of anatomy, physiology, and chemistry in the first year, and carrying the student progressively and systematically from one subject to another until, at the end of his third year, he will have studied all the recognized subjects of a good medical education. Thirdly, in the important subjects of anatomy, physiology, chemistry, and pathological anatomy, laboratory work will be substituted for, or added to, the usual didactic lectures. Every student will have his place and time in the anatomical and chemical laboratories and in the microscope-room; and he will be made to feel that such work is quite as much required of him as attendance at recitations and lectures. Lastly, every candidate for a degree of Doctor of Medicine must hereafter pass a satisfactory examination in every one of the main subjects of medical instruction, and these examinations are to be, in part at least, by questions and answers upon paper, so that the governing boards of the University and the profession at large may know what the standard for the degree really is.

This system makes much greater demands than the old both upon the students and teachers; and it throws the School out of long-established connections with the other medical schools of the country. The Faculty and the Corporation have been encouraged to make these great changes by the belief that in the long run the best course of instruction will command the most public favor, and by their confidence in the support of the medical profession, which has been for a long time demanding some change for the better in the established system of medical education. The new scheme has been so arranged in its details as to present no serious obstacle whatever to students who do not neglect their opportunities. The fees have not been raised, although the quantity of instruction has been greatly increased; and the new plan is not only better for students in easy circumstances, but also more advantageous and less costly than the old for those whose means are slender. To provide the additional instruction which the new scheme demands, some of the members of the Faculty have increased their work in the School, and some new appointments have been made, a part near the close of the year 1870–71, and a part since the year 1871–72 opened. The appointment of an assistant Professor of Physiology and the

equipment of a physiological laboratory has put that department of instruction upon a much better footing than ever before.

What the Medical School now needs is liberal endowment. Under its new organization it emphatically deserves, as well as needs, another building, an ampler equipment, and less scanty salaries. * * *

It was a part of the plan for reorganizing the Medical School, that much greater facilities for studying chemistry, pathological anatomy, and physiology experimentally and by the use of the microscope, should be provided for the students than had previously been given them. The Medical Faculty were anxious to find means to enlarge the chemical laboratory in the basement of the building in North Grove St., Boston, and to fit up a new microscope-room and physiological laboratory in the attic. Most opportunely, in June last, Mr. Samuel W. Swett authorized the Corporation to draw upon him for five thousand dollars from the estate of the late George Woodbury Swett, a graduate of the College and of the Medical School, to be used for preparing and fitting up a laboratory of physiology at the Medical School.

In the summer, three large, well-lighted rooms were made in the attic of the building, by throwing out some large dormer windows on the north side of the roof. Two of these rooms are devoted to physiology, while the other is the microscope-room. It was necessary to build a stairway by which to gain access to these rooms, and to provide an additional furnace with which to warm them. Simultaneously the chemical laboratory was greatly enlarged, so that it now contains accommodations for nearly one hundred students. These improvements cost altogether about $7,000, of which about half was chargeable to the bequest of Dr. Swett, and the other half was advanced by the Corporation, to be ultimately paid from the receipts of the school. Never was gift more timely than that of Dr. Swett. His friend, Dr. Henry P. Bowditch, had just been appointed Assistant Professor of Physiology, and yet, however much the Faculty desired to strengthen that department of instruction, and to give Dr. Bowditch the means of teaching the subject to advantage, there would have been great difficulty in providing and equipping a laboratory, had it not been for the opportune provision so liberally made. * *

The main reason for urging the immediate construction of another building for the Medical School is, that the invaluable collection made by Prof. J. B. S. Jackson is exposed to cruel risk in its present position. To the northwest and west of the Medical College are a large number of wooden buildings of the most inflammable sort, and there is little or no vacant land between these tinder-boxes and the College building. Moreover, there are numerous fires within the building for warming it, and in the basement is a chemical laboratory. A building of moderate size and cost would contain the Museum itself; but it is very desirable that a laboratory for pathological anatomy and at least one lecture-room should be connected with the Museum. The report of Dr. Ellis, Dean of the Medical Faculty, presents in their true light the great value of the collection, the risks to which it is now exposed, and the duty of preserving it. This is not a question of enlarging the University's means of instruction; it is simply a question of preserving or losing what has been acquired, with favorable opportunities, in many years by patient labor and rare self-sacrifice. * * * * *

The Medical School has only one endowed professorship. The School is making a determined effort to raise the standard of medical education, and ought to be made in a measure independent of the number of its students. All its professors are scantily paid, and some of them are not paid anything. It is sure to lose students for some years to come by maintaining a high standard for the degree of Doctor of Medicine; for medical education is at a very low ebb, and the degree can be got for very small attainments at schools of fair reputation with the public. The community is nearly concerned with every effort to improve the condition of medical education; the need of a skilful physician is one which sooner or later comes home to every man and woman. The University asks with confidence for prompt and liberal aid in establishing the Medical School upon a firm and independent basis.

ON THE TREATMENT OF PURULENT OPHTHALMIA IN NEW-BORN CHILDREN.

By R. Liebreich, Ophthalmic Surgeon and Lecturer to St. Thomas's Hospital, London.

Gentlemen,—This is not a disease which is amenable to treatment only up to a certain degree, and which may lead to unfavorable results even under the most rational treatment; but, on the contrary, it is an affection which, even in its worst form, is always perfectly curable.

What, now, is this treatment? It consists, first, in careful cleansing; secondly, in the local application of cold; and, thirdly, in cauterizations with mitigated nitrate of silver (one part of nitrate of silver and two parts of nitrate of potassium fused together). Allow me to speak of this in a somewhat elementary and detailed manner. As regards cleansing, it is above all necessary to explain to the attendants the importance of it, for, ordinarily, the fear of injuring the child prevents them from properly opening the eyes in order to remove the secretion. I do not recommend syringes, so generally used, for cleansing—first, because they are dangerous to the attendants, who, in using them, may easily have some of the contagious matter spattered into their eyes; secondly, because by this method the secretion is not completely removed, even after pouring much water over the child. A fine sponge, if you can rely upon its being kept clean, or, if not, small pieces of moistened linen rag, are preferable for effectually cleansing the conjunctiva.

The application of cold, if made in a careful and suitable manner, is of great assistance in the treatment. In the mildest form of the disease this application alone may even effect a cure in a few days. It is then only necessary to apply, for several hours a day, small linen rags, moistened by being dipped in cold water, changing them constantly. In the more serious cases, on the contrary, when there is much swelling, redness, and heat in the eyelids, and a copious discharge of thick, yellow, purulent secretion, it is necessary to apply, day and night, without intermission, small rags, previously placed upon ice, and to renew them continually. Later, when the elevated temperature begins to fall, the applications may be discontinued during the night, and gradually reduced, according to the course of the disease. In order to prevent the child from taking cold, it is necessary that the rags should be of a size merely to cover the eyelids without touching the bridge of the nose, and not to make them too wet.

We now come to the real curative treatment—that is, the cauterization. It should only be done with mitigated nitrate of silver. The eyelids should be reversed one after the other, and, after being carefully cleansed, touched with the caustic, which must be passed over all the swollen and red part of the mucous membrane. Before replacing the eyelids in their natural position, it is necessary to neutralize the free nitrate of silver by a drop of salt water. For the first few days only of the disease we may restrict the treatment to the application of cold, and then commence the cauterizations; repeat them once a day, never more frequently, and, after an evident reduction of the disease, once every two or three days. It is important not to repeat the cauterization until the scar of the previous one has disappeared.

To drop weak solutions of nitrate of silver into the eye is not advisable, even in the mildest forms; for the graver forms it is completely insufficient. Cauterization with pure nitrate of silver ought never to be used, neither in this nor in any other disease of the conjunctiva, as it is impossible to limit its effects. The slightest touch with pure nitrate of silver, in fact, produces a strong cauterization, not only limited to the surface of the mucous membrane, but attacking the subjacent connective tissue. The cicatrization which is the result of such cauterizations produces a permanent irritation of the eye, which cannot be removed by any possible means. None of the other known caustics can replace the mitigated nitrate of silver in the treatment of purulent ophthalmia. Let nobody avoid the trouble of preparing a pencil of nitrate of silver himself if he has not a suitable one already prepared at his disposal. The sole difficulty lies in procuring an iron mould, into which a mixture of one part of nitrate of silver and two parts of nitrate of potash is to be poured, after having been melted over the fire. This difficulty could be avoided by immersing an iron wire repeatedly with one end into the melted mass until, on cooling, a sufficiently thick layer of caustic adheres to it. That is the procedure which I formerly recommended for caustic probes in cases in which it is desirable to cauterize with a very fine point or in a very narrow canal (lachrymal canals, lachrymal sac, ciliary roots, &c.).

In the most difficult cases, cleanliness, cold and cauterization are sufficient, and enable you to form a good prognosis. The case is, however, different when children come under your treatment after a more or less great part of the cornea has been destroyed, the iris projec ing, the capsule of the lens injured; here the prognosis depends entirely, in the individual case, on the existing destructions. Ulcers of the cornea of no great extent, and not too near to perforation, allow of a still favorable prognosis; but it becomes more unfavorable already, when perforation has taken place, and the iris projects. There is a decidedly bad prognosis if almost the greater

part of the cornea had been destroyed before the child came under your treatment.—*London Med. Times and Gazette.*

Medical and Surgical Journal.

Boston: Thursday, February 22, 1872.

IMPALEMENT.

We present, in this number of the Journal, the results, as shown by autopsy, of an impalement which occurred more than twenty years ago, wherein the handle of an agricultural instrument passed, *per vaginam*, into and through the abdominal cavity, and, perforating the diaphragm, entered the thorax, without marked injury to any of the viscera lying in its course. This case adds another to the series of well nigh incredible instances of recovery after most serious injuries which have occurred in this country within the last fifty years, and which are scarcely accepted elsewhere as veritable. Within a short time an eminent English surgeon, delivering a lecture to his class, alluded to a case of this kind, occurring in this country, stigmatizing it as "another of those American cases which no one believes outside of the United States." We can afford to smile at the insinuation of Munchausenism contained in the distinguished Professor's expression, in view of the unusual succession of these remarkable cases. That a tamping rod of iron, or a section of gas-pipe, should pass through the anterior lobes of the cerebrum without fatal effect, is certainly wonderful, but not inconceivable. It is, however, *well known* in the profession of this country that the cases have actually occurred; they are authenticated by medical men of the highest reputation among us, and many of us have held in our hands the perforated cranium, which is the best possible witness, after many years, of the recovery which has been deemed by the incredulous in other countries as an instance of American boasting.

In connection with the case of impalement, above alluded to, we present two instances which, by a singular coincidence, we find reported in recent English journals, and which bear so close a resemblance to the "American" case as to substantially confirm the full authenticity of the latter. We deem it, however, a matter of special fortune that after an interval of more than a score of years, the nature of the internal lesions produced by the impalement should be so fully verified by the *post-mortem* inspection.

Mr. Alfred Freer, of Stourbridge, communicated the following case of *impalement*. On the evening of the 9th of August, 1870, I was sent for to see an Irishwoman, æt. 33, the mother of two children, who was said to be dying. It appeared that having finished her work at the top of a corn-rick, she chose to slide off instead of getting down by the ladder; some one had left a hay-fork with the handle uppermost against the stack. She slid down and lighted on the ground upright, impaled on the fork. The farmer ran to her, and with much difficulty succeeded in pulling the fork out of her body; he assured me that it was bloody fully two feet up the stick; the woman fainted and was sick, some brandy was given to her, she was placed in a carriage and brought home. I found her lying on a brick floor, and having lost much blood she was cold and almost pulseless, but sensible, and complaining of great pain in the region of the heart. Breathing very hurried and irregular; a little blood flowing from the vagina. Upon examination, I found this organ uninjured, but on the left side of the unimpregnated uterus about two inches or less from the os cervicis, my index finger passed to its root into a large, irregularly cut wound, apparently formed at the junction of the uterus with the left ligament. I withdrew my finger, and as there was a great gush of blood, I proceeded to plug, filling the wound bit by bit with strips of lint, and could have pushed in any amount of this, evidently into the peritoneal cavity. The hæmorrhage ceased, and I proceeded to examine the side, and found the sixth rib broken midway between the spine and the sternum. Considerable emphysematous crackling reaching up the axilla (punctured pleura). I applied a large plaster and a body bandage, and gave an ether mixture; the woman was too ill to be moved, and lay all night on the floor. Aug. 10.—Has rallied from the collapse; vomits frequently; quick respiration; pulse 120; urine clear. August 11.—Very thirsty; constant cough; great pain in left side;

the vomiting has ceased. August 12.—Better, but suffering from pleurisy; abdomen free from pain and swelling; "soreness" complained of from the pubic region toward the left axilla; no further vaginal bleeding, so tried to-day to withdraw the plug, but after pulling away the first strip, some bleeding began, so desisted. August 14.—Withdrew the remaining plug. From this date the woman steadily improved. On the 21st, I found all emphysematous swelling gone, and she had become bright and cheerful. Beyond a dose of castor oil repeated two or three times, and a full dose of calomel and opium on the 12th to allay pain and produce sleep, the medical treatment was *nil*. September 3.—She was down stairs washing a table as cheerful as possible, but a bit "wake." December 4.—She seems perfectly well; has been poorly at two periods since the accident; says she sometimes feels a pain after hard work, just where the fork struck her. So speedy and complete a recovery after such an impalement is very remarkable. "I felt it go up my side," said the poor woman, and beyond all doubt the pike penetrated by the side of the body of the uterus, traversed the abdominal cavity, and impinging on the diaphragm, pushed with such force against the rib as to break it. I attribute her recovery to one circumstance alone, that the rounded smooth big end of the pike entered her body, and not one of the forks, and that therefore the intestines were *pushed* before it, and thus escaped injury.—*The Doctor.*

In the *Medical Times and Gazette*, Sept. 23, 1871, a case is detailed in which the writer (Mr. Humphreys) gives the following account of the accident: "Last Good Friday (April 7), George W., aged 11 years, was on a rick of straw, playing at soldiers with another boy, who, being on the ground, charged at him with a rick-stake, on which he fell, and which was driven into him. The stake, which was slightly curved at the upper part, was forty-three inches long and three inches in circumference, being very sharp-pointed at its extremity. As much as seventeen and a half inches of it entered his body. It struck him just in front of the right spermatic cord, and passed beneath Poupart's ligament into the cavity of the abdomen, traversing the whole of the cavity across to the left side, and then entered the thorax through the diaphragm, displacing the heart and pushing it to the right side of the sternum, piercing the left lung, and then passing out between the seventh and eighth ribs, and then under the muscles and integuments in the axillary space, and along the upper third of the humerus, which it kept extended above the boy's head, the external skin not being ruptured."

In the removal of the stake, four hours after the accident, no anæsthetics were given and the boy was held down by four strong men, while Mr. Humphreys and his assistant, Dr. Lawson, used their whole strength in removing it, taking care to have the course of the stake followed by the fingers of a gentleman present to prevent the admission of air into the cavities. Not more than a teaspoonful of blood was lost. The heart still remained displaced. On the boy moving, a lump of the small intestines protruded from the wound, as large as an orange, which was replaced, the wound ligatured, cold, wet compresses applied along the whole course of the passage of the stake, and opium administered.

General emphysema ensued with peritonitis, severe cough and dyspnœa, reddish mucus expectoration and crepitus over left lung. The right testicle sloughed out. The treatment consisted of calomel and opium, poultices, and a diet of gruel and barley waters alternating with beef tea and wine, according to indications.

The writer considers the principal points in the case, "first, the stake having been left in so many hours the injured vessels in its course were sealed by the formation of coagula, and thus hæmorrhage was prevented; and, secondly, the calomel and opium seemed to act as a charm in staying the extensive serous inflammation, for whenever we discontinued their use the symptoms returned."

In six weeks the boy was able to sit up and play and eat his ordinary food, and was put upon quinine and steel, cod-liver oil and wine.

On examination of the boy, five months after the accident, he was able to walk about, and was perfectly free from pain, even on pressure.

There was slight enlargement of the abdomen, with the cicatrix of the wound in the left groin; the right testicle absent. There was also a flatness of the left side of the chest, the left lung being perfectly consolidated from the fourth rib downward, and the breathing puerile all over the right side in consequence. The apex of the heart was still beating an inch out of its right place.—*National Medical Journal.*

THE TREATMENT OF SYPHILIS by the hypodermic injection of the bichloride of mercury has recently received considerable attention in the profession, and has had warm partisans for and against its availability. As a contribution to the literature of this subject, we take pleasure in giving our readers an abstract of an article published by R. W. Taylor, M.D., in the *N. Y. Med. Gazette*, wherein he presents the results of his own extended experience in the new method.

Without making the hypodermic injection of the bichloride the *sine qua non* of treatment, or entirely abrogating the time-honored modes of the administration of mercury, Dr. Taylor has found many indications which favor the employment of the subcutaneous method. He has found it to give the best results in the secondary lesions of the skin, as in roseola in its recent stages, or in the papular syphilides which do not tend to pustulation, in the syphilitic neuroses, arthralgia, cephalalgia and fugitive rheumatoid pains, in iritis of syphilitic origin, and in certain cases of anæmia. It is less effective in the treatment of syphilitic condylomata and mucous patches. It is regarded as a valuable adjunct to the iodide of potassium treatment of the tertiary stage. Regarding the effects of the cumulative action of the remedy, they are considered as at the minimum as compared with other modes of administration. The dose injected was, as a rule, one-eighth of a grain in twelve drops of water; the places of election for the operation being the back, abdomen and loins, parts, in other words, the least exposed to irritation. The time required for the disappearance of the secondary lesions averaged from six weeks to two months.

Dr. Taylor summarizes his observations as follows:—

1. That the use of the bichloride of mercury by hypodermic injections, though a method of treatment possessing certain advantages, is, for various reasons, of limited application.

2. That it is useful in the whole secondary period of syphilis, in roseola, and in the various papular syphilides, and in that form of pustular syphilide in which there is only slight tendency to the formation of pus.

3. That it very rapidly cures all syphilitic neuroses, and that it is very beneficial in the cachexia of syphilis, whether accompanied or not by perceptible lesion.

4. That it possesses no advantages over other modes of administering mercury in the treatment of mucous patches and condylomata lata; and that these lesions yield more rapidly to a local than to any form of constitutional treatment; and that in the syphilitic lesions of the nervous system and of bone, particularly if late, its use is not to be commended.

5. That the very early tertiary syphilitic lesions, provided they are not of an ulcerative character, may be very much benefited by it, and that the simultaneous administration of iodide of potassium internally, may produce a cure more rapidly than when the two are given internally.

6. That the peculiar advantages of the treatment are: the smallness of the amount of mercury used; the rapidity of action; and the absence of systemic disturbance.

7. That a very minute quantity of mercury, averaging from two to three grains, thus administered, may cause the disappearance of very extensive syphilitic lesions, and the alleviation of very severe symptoms.

8. That in the greatest number of cases, an injection every second day of an eighth of a grain of the bichloride of mercury will produce a cure in rather less than two months, and that in very urgent cases they may be pushed, with good effects, to the extent of one or two daily.

9. That the rapidity of cure is the rule rather than the exception, and that the time required may be stated as varying between three weeks and two months.

10. That when the injections are given every second day it is very rare to observe any unpleasant systemic effects of the mercury; and that even when they are pushed more than this, these effects are never as severe as when mercury is pushed to a similar extent by the mouth.

11. That the relapses after this treatment are equally as frequent, as rapid, and as severe in character, as when mercury is given in other ways.

12. That there are unpleasant local effects of the injections, such as pain of the puncture, pain over the site of injection, induration of the connective tissue and abscesses.

13. That in many cases the pain is very

slight, and soon ceases to trouble the patient; but that in others it is so severe and persistent as to necessitate a discontinuance of the treatment; and that in every case, some slightly unpleasant local effects are experienced from the use of the injections.

14. That in exceptional cases, the injections cause a low grade of inflammation in the subcutaneous connective tissue, producing a decided induration in deep portions of the derma; and that, owing to complications which might, perhaps, arise from this condition later on, it is advisable to discontinue the injections in these cases.

15. That this induration may be observed in many cases in which it is only of an ephemeral character.

16. That if proper care is used in administering the injections, abscesses will rarely, if ever, occur.

17. That it is absolutely necessary that the patient should be both intelligent, and, at the same time, thoroughly impressed with the gravity of his disease, in order that he may comprehend the advantages he is to derive from this mode of treatment; otherwise, he could not subject himself to the inconveniences experienced in the course of the treatment.

18. That while in dispensary and hospital practice the injections may be frequently given, in private practice the smallness of a patient's means may often be an obstacle in the way of the continuance of the treatment.

Finally, that, while in some cases the treatment may be useful by reason of its rapid action, and in others, for the smallness of the dose, the inconveniences which it produces, the objections of the patients, and the presence of lesions which contra-indicate its use, confine its sphere of usefulness to very narrow limits.

Arsenic in Leucorrhœa and Menorrhagia.—The use of small doses of arsenic, long continued, is lauded by a writer in the *British Medical Journal* for January 6th, 1872, in the treatment of certain obstinate cases of menorrhagia and leucorrhœa. From two to six minims of the liquor arsenicalis are administered as the commencing dose, and the quantity is gradually increased, with occasional intervals for elimination. The indication for the remedy is present in those forms of menorrhagia dependent on uterine hyperæmia of a passive or atonic character. As a result of this treatment, the general condition of the patient is improved, the digestive function becomes more vigorous. The intercatamenial period gradually resumes its normal length, the excessive flowing at menstruation and the leucorrhœal discharge in the interval are controlled, and the hyperæmic tendency is corrected. The author admits that the use of the agent is based on empiricism, but he quotes his own experience and that of eminent gynæcologists (including Simpson, Barnes and Tilt) to support his views.

Is Insanity on the Increase?—An authority (Dr. Maudsley) whose opinion in such matters is of great weight, has expressed his belief, after a thorough comparison and analysis of the statistics of insanity in England for the past 12 years, that the popular notion of an increasing amount of insanity, based on the demand for greater hospital accommodations, is entirely fallacious, and that in reality no more people go mad now, in proportion to the whole population, than formerly.

Chloral Hydrat fulfils a novel indication in the hands of Dr. C. S. Strother, of Barnesville, Ga., that of counter-irritant and local anodyne. In this "new departure" it is said to be excellent in neuralgia, pleurodynia, rheumatism, gastralgia, nausea and vomiting. A saturated aqueous solution of the chloral is applied over the seat of pain with slight friction; and glycerine, olive oil or sweet cream is used as a subsequent dressing. There will in most instances be enough of the chloral absorbed to produce a considerable anodyne effect, in addition to the rubefacient action.

Death from the Hypodermic use of Morphia.—Western medical journals of recent date contain reports of the death of a prominent physician of Pennsylvania from an overdose of morphia administered hypodermically by the patient himself. The medicine was taken for the relief of the pain of erysipelatous inflammation of the face. About a grain of the opiate was taken, and in two hours profound stupor

followed, terminating, after two hours more, in death.

Stasistics of Transfusion of Blood.—The following summary deductions are from an article recently contributed by Dr. W. B. Drinkard, of Washington, D. C., and reprinted in the *Richmond and Louisville Journal of Medicine*. The paper contains a *résumé* of the history of transfusion as an operation and of the results which have been obtained in all the one hundred and seventy recorded cases. The whole essay is a valuable contribution to the subject.

Granted, then, that blood, as nearly as possible similar to that of man, is the only essential, and that its origin, this condition fulfilled, is of secondary importance, how does it act?

According to Dr. Playfair, "the benefits derivable from it are probably two-fold:—1st. The actual restitution of blood which has been lost; and, 2d. The supply of a sufficient quantity of blood to the heart to stimulate it to contraction, and thus to allow the circulation to be carried on until fresh blood is formed. *Its stimulant action is probably of far the more importance.*" To these I would add:—3d. The supply of a sufficient amount of blood to the cerebro-spinal axis to awaken its exhaustive motive power; and 4th. The supply of nutritive material to the starved economy—every portion of which, in those conditions where transfusion is decided upon as a last resort, must be in urgent need of restoration, and in which every cell and fibre, every ultimate constituent, is failing in its function by a drain of the reparative material needed to bring it, in elementary constitution, up to that point where nutrition is transformed into heat, motion and vital force.

* * * * * *

It is, then, probable that the action of transfusion as a remedial agent is, instead of two-fold, *three-fold:*—1st. Stimulant to the heart and nerve centres; 2d, Nutritive to the economy at large; 3d. Repletive to the circulatory system.

In conclusion, the practical inquiry remains to be answered—to what conditions has transfusion been remedially applied, and with what success?

1. The cases which seem, during the present century, to have been specially selected for the experimental essays of transfusion, are those of *post-partum* hæmorrhage. Of these (not reckoning those of uncertain nature), I find a record of 89 cases, of which 56 were successful; I simply give here the gross results without entering into the details.

2. For cases of surgical hæmorrhage, transfusion has been performed 23 times; result, 12 deaths, 1 doubtful, 1 in which the patient died before the operation could fairly be said to have been commenced. In two other surgical cases the result was unfortunate or null.

3. In hæmorrhages, other than surgical (including the higher grades of anæmia due to hæmorrhage), 13 cases give 5 complete successes, 1 incomplete.

4. Of 9 transfusions performed in surgical cases attended with extreme exhaustion, 8 were unsuccessful.

5. In asphyxia of the new-born child, 3 cases; 2 failures.

6. In cholera, 4 transfusions were followed by death in each case, but in each case, also, after temporary, and in 1 after marked reaction.

7. Poisoning by carbonic oxide, treated by transfusion in 7 cases, yielded to it only in 2; the theory directing its use in these cases being the restitution to the blood in the body of the oxygen displaced by the carbonic oxide taken into the circulation.

8. Dieffenbach made a trial of it once in hydrophobia, without success.

9. Leucæmia, Bright's disease, mania, and marasmus from various causes, have each been treated by transfusion, but with somewhat doubtful result. In some of these conditions, as anæmia, chlorosis, leucæmia, the operation is worthy of more extensive trial.

10. Transfusion has also been suggested, by Dr. Markham, as a means to be used in the cattle plague, and possibly the records of veterinary surgery may contain some late cases in which this means has been used with advantage. I have not, however, looked up this branch of the statistics of the subject, its records not being so generally accessible as those of experimental science on the human subject.

It will be remarked that transfusion has proven much more successful in the hands of obstetricians, or rather in the obstetrical cases, than when used as a surgical or medical agent proper, but it will also be seen that accoucheurs have thus far availed themselves of it much more frequently than either of the other classes of practitioners. And while other suggestions as to the remedial efficacy of transfusion might be added to those here given, and will, doubtless, present themselves as accomplished facts in

the future, it is, however, probable that it will always find *post-partum* and primary surgical hæmorrhages the most favorable conditions for its application. In so far as those cases are concerned in which the operation has been performed, they speak for themselves, and the result of the array, I think, justifies the belief that transfusion is finally, and with every right, establishing its claim to be considered one of the least doubtful and most valuable resources of our art.

The following list of medical students received the degree of Doctor of Medicine at the close of the collegiate term, one week ago, at the Mass. Med. College:—

Geo. Ed. Abbott, Charles Francis Atwood, Gideon Barnaby, Charles David Bradley,* Archibald Keightly Carruthers, Julian Augustus Chase, John Casselli Cockburn, James Francis Couch, Wm. Ballard Cutler, Asahel E. Darling, Donald Darrach, George Erastus DeWitt, Joseph B. Fenwick, Chas. Augustus Fernald, Walter Channing Gale, Eugene A. Gilman, David R. Gun, Francis Augustus Harris, Geo. A. Jordan, Stephen H. Kink, Walter W. Lovejoy, Peter H. McMillan, John Ambrose McArthur, Wm. Neilson, Jr., Chas. Lawrence Randall, James Dwyghrt Seymour, Wm. Freeman Southard, J. Herbert Twombley, Frank T. Vinal, Emory L. White, George H. Wellman, James Weir, Clifton Ellis Wing, Lewis Augustus Woodbury.

On Sick-headache.—By Samuel Wilks, M.D., F.R.C.P., F.R.S., Physician and Lecturer on Medicine at Guy's Hospital. The true cause of sick-headache lies deep in the patient's idiosyncrasy, and is developed by a hundred different causes. The advice, then, to sufferers is to give as much tone as they can to their nerves by adopting all those methods which experience has shown to be good, and then avoid, as far as is practicable, all those causes which are known to excite an attack. I need scarcely describe a sick-headache—how one rises in the morning more dead than alive, perfectly unable to swallow the smallest particle of food, and often perhaps actually sick; how the head throbs, and the pain increased by the slightest movement; how speaking or doing is a burden beyond bearing; how one prays to be left alone in the utmost quiet, so that he may, if possible, sleep. To other persons the sufferer looks extremely ill, very pale, dark around the eyes, and with contracted pupil. To himself his head feels hot, and the application of cold is most refreshing. The clamminess in the mouth, the nausea and general gastric disturbance, are secondary, and have no connection with any improper meal, and thus is in no way relieved by the too frequent and ignorantly administered purgative. This is not needed, and has no good result. The only remedies which are of any avail are those which act on the nervous system, such as hot tea and coffee; or, after the stomach is quieter, and the more urgent symptoms have passed off, a little wine or ammonia. If the headache take more the form of hemicrania, then remedies are occasionally useful, as the local application of the bisulphide of carbon, or galvanism, and internally the bromide of potassium. This is the only drug which I have really seen to be serviceable. Whilst the nausea exists and the worst symptoms prevail, even this remedy is of no avail.—*British Med. Jour.*

An Error of the Empire.—The new and magnificent Hôtel-Dieu, whose construction has already cost many millions of *francs*, and which would require in addition, for its completion, at least five millions, and for the roofing and walls two millions, has been utterly condemned by a Commission of the hospital surgeons and physicians of Paris, after a thorough examination. After hearing the report of some of the most competent authorities, the Society of Hospital Physicians and Surgeons unanimously resolved that the Hôtel-Dieu, by its construction, does not fulfil the conditions required by a hospital in the actual state of science and hygiene. Drs. Hérard and Hardy alone, while admitting the construction of the hospital to be detestable, would have been willing that the eight hundred beds should be reduced to four hundred, and the building utilized for diseases of the skin, eyes, &c., keeping away really sick people—a proposition which was emphatically negatived. As a hospital, this costly error of the Empire would be more murderous than a great battle. It may be utilized as a Hôtel de Ville, in lieu of the building destroyed by the Communists.—*Ibid.*

Loyalty to Science.—The Paris Academy of Medicine have refused to strike off the names of their eminent German colleagues from the roll of members, as they have been commanded to do.

* Graduated under the new system.

Medical Miscellany.

DEATH OF DR. HELLER.—Dr. Johann Florian Heller died, after a short illness, on November 21. He was 58 years of age, and had for some years past suffered from disease of the heart. He was Director of the Pathologico-Chemical Institute, and teacher of Pathological Chemistry in the Vienna University, beside having extensive employment as a Government expert. The progress of pathological chemistry has been greatly forwarded by his efforts ; he was, indeed, the first who placed this branch of medical science in its proper position in Austria, and his work in this direction has obtained general recognition both at home and abroad. Clinical examination of the urine has obtained its present important position, both in hospitals and in private practice, in great part through his exertions. Latterly he has been so much employed in official duties as to be unable to publish any work, but he has continued to inspire younger inquirers with some of his own energy. His well-known periodical, *Archiv f. Pathol.-Chemie und Mikroscopie*, was continued during ten years.—*Wiener Méd. Zeit.*

THE PRESERVATION OF VACCINE LYMPH BY GLYCERINE, as proposed by Dr. Muller, of Berlin, is meeting general favor. The glycerine should be pure. Dr. Muller can testify to the preservation of lymph for two years by this means. When used, or unless to be long preserved, an equal portion of distilled water is added to the glycerine solution, though it may be used undiluted. Dr. Muller considers that the use of glycerine as a solvent facilitates the perfect solution of the lymph, retards the coagulation of the exposed blood, and better insures absorption. —*Michigan University Medical Journal.*

A NOVEL METHOD OF PRODUCING SLEEP IN INFANTS.—Dr. Curran, writing in the *Dublin Quarterly Journal of Med. Sci.*, of the Medical History of the Himalayas, speaks of a curious way which the women of the country have of quieting their children when obliged to leave them. When a mother goes into the field to work, or is otherwise unable to take her child with her, she selects some sheltered spot near a stream, in which she places some straw for a bed for her infant, and then directs, by means of a piece of split bamboo, a current of water, of from one to two or three inches in diameter, on its uncovered occiput and temples. This produces a soporific effect, which generally lasts as long as the water continues to flow. The sleep is said to be very soothing, and children who have been much subjected to its influence are known to have been unusually free from the annoyances incidental to the period of dentition.—*N. Y. Med. Record.*

SIMPLE LUXATION OF THE SEMI-LUNAR BONE. —A case of simple luxation of the semi-lunar bone, on the anterior portion of the right wrist of a sailor, æt. 25 years—an exceedingly rare accident—is reported by C. Granville Stone, student at the University of Maryland.—*Balt. Med. Jour.*

TO CORRESPONDENTS.—Communications accepted:—A Case of Fatal Otorrhœa.—The possibility of the Diagnosis of Syphilis by means of the Microscopic Examination of the Blood.—A Case of Morbid Condition of the Umbilical Cord.—A new and uniform Method of recording the Hearing Power in Otological Practice.—A Case of Phthisis.

BOOKS RECEIVED.—The Diseases of Women. By T. G. Thomas, M.D. Third Edition. Philadelphia: H. C. Lea. 1872. (From A. Williams & Co.)—Diagram of the Nerves of the Human Body. By W. H. Fowler, F.R.C.S. Edited, with additions, by W. W. Keen, M.D. Philadelphia: T. Hamilton. 1872. (From Publishers and A. Williams & Co.)

PAMPHLETS RECEIVED.—Ozokerit as a Therapeutic Agent. By Henry Samuel Purdon, M.D., L.R.C.P., Physician to the Belfast (Ireland) General Hospital, &c. Pp. 4.—Report of the Pennsylvania Hospital for the Insane, for the year 1871. By Thomas S. Kirkbride, M.D., Physician in Chief and Superintendent. Pp. 62.—The Classification and Treatment of Inebriates. By Joseph Parrish, M.D., President of the Pennsylvania Sanitarium, Media, Penn. Pp. 16.—Fourth Annual Report of the New York Orthopœdic Dispensary. Pp. 22.—American Association for the Cure of Inebriates. Proceedings of the Second Meeting, held in New York, Nov. 14 and 15, 1871. Pp. 115.—Reports of the Trustees and Superintendent of the Butler Hospital for the Insane, Providence, R. I. Pp. 22.—Report of the Committee on Criminal Abortion. Extracted from the Transactions of the American Medical Associan. Pp. 22.

DIED,—At Peekskill, N. Y., Dr. Charles A. Lee, aged 74 years.

Deaths in eighteen Cities and Towns of Massachusetts for the week ending Feb. 17, 1872.

Cities and Towns.	*No. of Deaths.*
Boston	136
Charlestown	12
Worcester	21
Lowell	17
Milford	5
Chelsea	2
Cambridge	18
Salem	11
Lawrence	11
Springfield	10
Lynn	13
Gloucester	4
Fitchburg	3
Taunton	6
Newburyport	3
Somerville	4
Fall River	10
Haverhill	6
	292

Prevalent Diseases.	
Consumption	63
Pneumonia	36
Scarlet fever	18
Croup	10

Springfield reports one death from smallpox.

GEORGE DERBY, M.D.,
Secretary of State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, Feb. 17th, 136. Males, 71; females, 65. Accident, 1—apoplexy, 4—asthma, 1—inflammation of the bowels, 2—bronchitis, 5—congestion of the brain, 2—disease of the brain, 6—cancer, 3—consumption, 26—convulsions, 1—croup, 3—debility, 3—diarrhœa, 2—dropsy, 3—dropsy of the brain, 2—epilepsy, 1—erysipelas, 5—scarlet fever, 4—typhoid fever, 2—gastritis, 1—disease of the heart, 2—hæmorrhage, 2—jaundice, 1—disease of the kidneys, 3—disease of the liver, 1—congestion of the lungs, 5—inflammation of the lungs, 17—malformation, 1—marasmus, 2—measles, 1—old age, 4—paralysis, 3—premature birth, 3—peritonitis, 1—puerperal disease, 1 rheumatism, 1—tumor, 1—uterine disease, 1—ulcers, 1 —whooping cough, 2—unknown, 6.

Under 5 years of age, 50—between 5 and 20 years, 6 —between 20 and 40 years, 31—between 40 and 60 years, 24—above 60 years 25. Born in the United States, 86—Ireland, 32—other places, 18.